

REMARKS

The claims are unamended but set out in this response for convenience.

The examiner maintains the rejection set out in the previous action, which includes the misstatement that the applicant has defined the term “labyrinthine” as meaning non-linear. As pointed out in response to the previous action, the applicant in the response of May 29, 2009 asserted that non-linearity is a characteristic of something that is labyrinthine. It is not a complete definition of “labyrinthine”. Simply because something is non-linear does not make it labyrinthine. There is a multitude of curves that are non-linear but could never be regarded as being labyrinthine, such as parabolic, hyperbolic, and $y = x^3$. As noted previously, the direct load pathway between the lower interface 13 and the upper interface 12 is always interrupted by slots 14. At page 9 line 8 it is pointed out that narrow load passages are shown in Figs 3, 4, 5, 6, 9 and 10. As noted in the following paragraph referring to the load path in the constructions depicted in these figures:

The only possible pathway for the disturbance is through the six passages between the different levels, therefore through a labyrinthic pathway. That is, the two levels of slots 14 perform the function of attenuating the shockwaves attempting to advance from the lower part 13 of the spacecraft towards the upper part 12 thereof where the payload is located, which is rather sensitive to said shockwaves.

The significance of this is explained on page 10 with reference to Figure 11:

Thus, as can be seen in Figure 11, following it as indicated by the arrow, when the shock

disturbance which comes from the lower interface 13 tries to advance towards the upper interface 12, it finds the lower level of slots 14 on which it reflects and advances only when it finds one of the three lower passage areas, see the lower part of Figure 11.

Continuing through these sections and finding the next level of slots 14 preventing passage, one part of the disturbance is reflected in them and another part travels circularly through the structural area between the slots 14, see the intermediate part of Figure 11. When it finally finds the upper passage it has lost an important part of its energy.

Similar results are obtained using slots of a different location and shape in the embodiment of Fig 7 where there is "overlap" between the ends of the slots precluding a direct load path from the lower interface to the upper interface.

For the load path to be labyrinthine therefore it must "wind around" the obstacles (elastic material-slots) present in the surface in question. The examiner's understanding that any non-linear load path would meet the requirements of the claim is therefore in error.

In discussing applicant's previous arguments, the Examiner states that applicant's have referred to shock waves "hopping from level to level of elastomer". The Applicant's attorney is unable to determine what part of the record forms the basis for this statement The applicant does, however state, as noted above, that the claim requires a winding load path between the upper and lower surfaces of the surface of revolution. and continue to assert that there is no such path disclosed

in Bakken.

The examiner indicates that feature 20 of Bakken, “the outer mounting ring” (see column 3 line 29) corresponds to the applicant’s surface of rotation. If it does, it contains no slots and so on this interpretation of Bakken, Bakken cannot anticipate any of the present claims which require “a set of slots (14) distributed over the surface of revolution”. In any case any load applied to the top of ring 20 would be transferred to direct to the bottom of ring 20, there is no prospect of any labyrinthine load path. However, the examiner’s interpretation is not entirely clear because she also refers to Bakken’s passages 32 and 34 as constituting slots that might meet the requirements of the present claims. These passages are not present in ring 20 but rather in the entire assembly of Bakken’s Figure 1. Possibly therefore the examiner regards this whole assembly as being a surface of revolution. . This, however, would be inconsistent with the applicant’s use of this term. Claim 5 depends on claim 3 which in turn depends on claim 1. Claim 5 requires slots in “both distributed on both faces of the surface of revolution” itself defined in claim 3 as a cylinder. Clearly what is contemplated is slots on the internal and external surfaces of the cylinder, an interpretation consistent with the figures of the present application and with equating outer ring 20 of Bakken with the “surface of revolution” required by the claims. However, even if the examiner is correct in her view that the whole of the assembly shown in Bakken’s Fig 1 is a “surface of revolution”, there are no slots corresponding to those of the present claim. The passages 32 and 34 in Bakken run from the top to the bottom surface and so do not provide obstacles in path of load transmission that would result in a labyrinthine load path. The load path would be within the shims 26 and so be linear.

It is therefore submitted that contrary to the examiner's assertions, Bakken does not disclose the applicant's basic inventive concept which is to place obstacles in the form of slots filled with elastic material in the way direct transmission of load between the upper and lower surfaces thereby creating a labyrinthine load path. . This being the case, Bakken neither anticipates claim 1 under 35 USC 102 nor does it provide any basis for combination with other art to found a rejection of obviousness under 35 USC 103.

None of the secondary references, remedy this fundamental defect in Bakken. Their contents were discussed in response to the previous action. None of them points to the desirability of a labyrinthine load path and so whatever else they teach, it is not the basic concept of the present application.

Neidhart places rubber rings between conically shaped telescopically mounted pieces that can act as a buffer to dampen impact or for supporting loads. There are no slots in any surface of revolution. It is true that Neidhart uses conical pieces as set out in present claim 4. But as noted above, it has no slots. The examiner's application of Neidhart to claims 17 and 18 is not understood. These claims both depend on claim 1 through intermediary claim 15 and so require all of the limitations of both of these claims (35 USC 112 paragraph 4). Claim 1 requires that the elastic material (15) is within the limits defined by the slots. Since, as just noted, Neidhart has no slots, but rubber rings surrounding frustocones, and Bakken has no slots in the relevant component, the combination of the two cannot teach what is claimed.

Hile essentially teaches use of an washer containing undulations to dampen vibrations between connected members. However, the entire load path runs through that washer. There is nothing corresponding to the slots required in the present invention or the concept of forcing the load path into a labyrinthine shape. Having regard to the application of Hile to claims 6 - 12, the shape required for meeting Hile's objective does not seem relevant to the present invention where the elastic material is present in a slot located in the surface of an attenuating device rather than acting as the entire attenuating device as is the case in Hile.

Brauss (US 5,746,411) again fails to make any contribution toward the basic concept of the present invention. The examiner points to the slots 19 supposedly having relevance to claim 13. This is not understood. According to column 3 line 60 and claim 1, feature 19 is a "neck" located between the end surfaces 18 of a core 16. This does not define a slot and definitely does not define a set of slots (14) defined on the surface of revolution (11) a spool formed by two cones joined at the vertex.

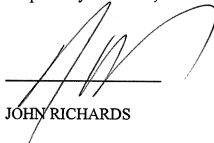
The rejection of claim 14 is still unclear. As noted in response to a previous action, the examiner commences by referring to Lefol, but makes no mention of Lefol in the substantive argument, referring instead to Bruas. It is assumed that Lefol was intended since there seems to be no mention of anything "H-shaped" in Bruas. So far as Lefol is concerned, it is again not clear which features the examiner refers to. There are no features 55 and 54 as such in Lefol. Features 54a and 54b are blocks of elastomeric material, not slots. Features 55a and 55b are filtering bearing stops apparently forming parts of the elastomeric blocks 54a and 54b. In any case, there are no

references to slots at all in Lefol making it difficult to understand the basis for the examiner's rejection.

It is therefore submitted that the present application meets the requirements of 35 USC 103.

In view of the foregoing it is submitted that this application is now in order for allowance and an early action to this end is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'JR', is written over a horizontal line.

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